

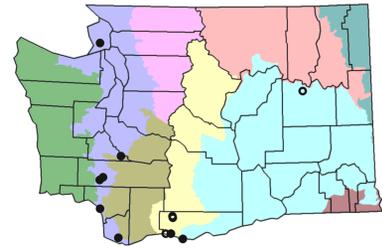
Isoetes nuttallii A. Braun ex Engelm.

Nuttall's quillwort

Isoetaceae - quillwort family

status: State Sensitive, BLM sensitive, USFS sensitive

rank: G4? / S1



General Description: Perennial quillwort, terrestrial or nearly so, of seasonally wet sites. Rootstock 2-lobed (sometimes 3-lobed), nearly spherical. Leaves linear, elongate, erect, to 20 cm long, tapering to tip, deciduous, somewhat rigid, spirally arranged, dull green to gray green or yellow green, pale towards the base. Base often surrounded by several black scales.

Reproductive Characteristics: Sporangia borne at the flattened base of the leaves; velum covers entire sporangium. Sporangium wall unpigmented. Megaspores white, 360-600 µm diameter, smooth or with low tubercles or short ridges. Microspores brown in mass. Identifiable from mid-April through early June.

Identification Tips: Quillworts can be distinguished from the new shoots of grasses and rushes by the bulblike stem and sporangia in the leaf bases. *I. minima* is distinguished by its partial velum, shorter stature, and spiny megaspores. *I. howellii* is distinguished by its partial velum and brown-streaked to brown sporangium wall. *I. bolanderi* and *I. occidentalis* are submerged or emergent aquatic plants. *I. echinospora* and *I. maritima* both have spiny-textured megaspores. Megaspore texture can be seen with a dissecting microscope.

Range: Southeast Vancouver Island, B.C., to southern CA.

Habitat/Ecology: Terrestrial in seasonally wet ground, seepages, temporary streams, and mud near vernal pools. Typically at low to middle elevations; documented elevations in WA are 60 to 105 m (200-345 ft). Associated species include Oregon ash (*Fraxinus latifolia*), Oregon crabapple (*Malus fusca*), rose spirea (*Spiraea douglasii*), Nootka rose (*Rosa nutkana*), reed canarygrass (*Phalaris arundinacea*), camas (*Camassia quamash*), saxifrage (*Saxifraga* spp.), clover (*Trifolium* spp.), annual hairgrass (*Deschampsia danthonioides*), bulbous bluegrass (*Poa bulbosa*), true babystars (*Leptosiphon bicolor*), and rushes (*Juncus bufonius* and others).

Comments: This species is inconspicuous and may be somewhat more widespread than the data currently suggest. It is also considered rare in B.C.

References: Flora of North America 1993+, vol. 2; Guard 1995; Lellinger 1985; Pojar & MacKinnon 1994.

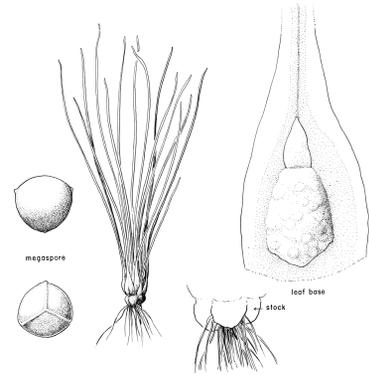


Illustration by Jeanne R. Janish,
©1969 University of Washington
Press



photo by Mark Sheehan



photo by Mark Sheehan